

## REMARKS

Applicant's counsel thanks the Examiner for the careful consideration given the application. Pursuant to the Examiner's request, Applicant has changed "characterized in that" to "wherein". Applicant has also amended claim 16 as suggested by the Examiner to resolve the concerns under Section 112, first paragraph. Applicant has also amended the claims to resolve the concerns under Section 112, second paragraph.

### 35 USC Section 102

Claims 16 and 28 were rejected under 35 USC 102 as anticipated by Khalid et al. (R1). To overcome this rejection, applicant has limited claims 16 and 28 to the two unique strains identified in claim 31; claim 31 has accordingly been cancelled. Applicant does not see these two unique strains mentioned in R1.

### 35 USC Section 103

Claims 16-21, 23-25 and 27-31 have been rejected under 35 USC 103(a) as obvious over Reinbold et al. (US 4,085,228), hereinafter R2, in view of R1. It is noted that R2 simply teaches the use of two cultures of *Lactobacillus plantarum*, these being Hansen's LP-1 and Hansen's LP-2 (col. 4, lines 23-25), as additional starter cultures for making low moisture mozzarella (pizza cheese). The resulting cheese has a reduced lactose sugar content, which results in pizza cheese which is substantially non-burning and has improved melt, flavor and color characteristics. However, this reference provides no teaching or hint as to how to provide greater aptitude to coagulate milk. As noted previously, the present invention is the discovery that two unique strains of *Lactobacillus plantarum* uniquely provide greater aptitude to coagulation of milk during its transformation into dairy products. The present invention does not have to do with reducing lactose sugar content in pizza cheese. The problem to be solved in the present invention is to find lactic bacteria which promote coagulation of milk. A person of ordinary skill in the art, seeking a solution to this problem, would find nothing of use in a reference teaching a technology to reduce lactose sugar content in pizza cheese. Accordingly, a person of ordinary skill in the art, seeking to promote coagulation of milk, would find no teaching, suggestion, motivation or reasonable expectation of success in R2, with or without R1. Furthermore, R2 is silent regarding the specific strains set forth in the present claims. Likewise, R1 also does not provide any mention of the specific strains claimed in the present application.

Moreover, R1, on page 3075, column 1, second paragraph, suggests the use of strains of *L. plantarum* which preferentially degrade  $\beta$ -casein. It is believed that the two strains presently claimed in claims 16 and 28 (*L. plantarum* LMG-P-21385, and *L. plantarum* LMG-P-21389), do not preferentially degrade  $\beta$ -casein, since said two bacteria strains work at low temperatures from around 6°C to around 12°C (see Specification at page 9, lines 6-22) that is lower than the physiological temperature.

In summary, the two references cited by the Examiner can be summarized as follows.

1. R2 teaches different *L. plantarum* strains for reducing lactose sugar content in pizza cheese, and does not provide any reasonable expectation of success regarding other unidentified *L. plantarum* strains which might be useful for promoting coagulation of milk.
2. R1 suggests trying to find strains of *L. plantarum* that preferentially hydrolyze  $\beta$ -casein in order to accelerate ripening of cheese. However, this does not provide any reasonable expectation of success as to whether or not Applicant's two specific strains of *L. plantarum* would be useful in promoting coagulation of milk. This is particularly true since Applicant's strains do not preferentially degrade  $\beta$ -casein, as discussed in R1.

Since the prior art references, alone or in combination, do not provide any reasonable expectation of success, it is clear that the claims as now presented are in condition for allowance, which is respectfully requested. If any further fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. HOFF-38315.

Respectfully submitted,  
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